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ABSTRACT

In an earlier laboratory experiment using university students in the United States, Tang and Baumeister (1984) examined the effects of the Leisure Ethic, Type A personality, and task labels on subjects' task performance. The results showed that the interaction between Leisure Ethic endorsement and task label was significant among Type A coronary-prone subjects, but was not significant among Type B subjects. Reported in this document is a study conducted to replicate the 1984 study, using a sample of university students (N=58) in Taiwan, Republic of China. Chinese college students were classified as either Type A or Type B, and as either high or low Leisure Ethic, based on the median-split in their scores on Type A and Leisure Ethic measures. The results suggested that high Leisure Ethic subjects had significantly higher reported frequencies of going to movies and live concerts than had low Leisure Ethic subjects. Type As had a significantly higher rate of going to live concerts than had Type Bs. Type As with a high Leisure Ethic endorsement attended more live concerts than the average of the other three groups. Type As with a low Leisure Ethic had a significantly better total academic performance than the average of the other three groups. For Type Bs, the results failed to reach significance. The results of Tang and Baumeister's 1984 study were replicated in the present study. (NB)

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Effects of Type A Personality and Leisure Ethic on Chinese College Students' Leisure Activities and Academic Performance

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Abstract

The study examined the effects of Type A personality and Leisure Ethic on students' leisure activities and academic performance. Chinese college students in the Republic of China were classified as either Type A or Type B, and as either high Leisure Ethic or low Leisure Ethic, based on the median-split in their scores on Type A and Leisure Ethic measures. The results of 2 x 2 ANOVAs suggested that high Leisure Ethic subjects had significantly higher reported frequencies of going to movies and live concerts than had those low Leisure Ethic subjects. Type As had a significantly higher rate of going to live concerts than had Type Bs. Further, Type As with a high Leisure Ethic endorsement attended more live concerts than the average of the other three groups. Type As with a low Leisure Ethic had a significantly better total academic performance than the average of the other three groups. However, for Type Bs, the results failed to reach significance. Individuals' Type A personality scores were negatively correlated with the number of times students went to the movies. The results of Tang and Baumeister's (1984) laboratory study using college students in the U.S. were replicated in the present study.

Effects of Type A Personality and Leisure Ethic on Chinese College Students' Leisure Activities and Academic Performance

Iso-Ahola (1980) has emphasized the importance of attitude-behavior correspondence and stated that a correlation between attitude and behavior can be improved "by measuring both concepts at the specific level or at the general level" (p. 266). Both "predispositions" (i.e., attitude and behavior pattern) and "behaviors" were measured at the general level in the present study (cf. Ajzen & Fishbein, 1977; Iso-Ahola, 1980). More specifically, the major purpose of the present study was to examine the effects of Type A behavior pattern and Leisure Ethic on individuals' "work" and "leisure" activities in a sample of university students in Taiwan, Republic of China.

Type A and Leisure Ethic

It has been shown in the U.S. literature that Type A coronary-prone individuals (Type As) are more hard-driving, competitive, aggressive, ambitious, and impatient than Type Bs (e.g., Friedman & Rosenman, 1974; Jenkins, Rosenman, & Friedman, 1967). Hughes, Jacobs, Schucker, Chapman, Murray, and Johnson (1983) suggested that Type As spent significantly more time moving about and exploring, and less time sitting still than Type Bs during both the waiting and the relaxation periods in an experiment. Glass (1977) examined Type As' performance in an academic setting and found that Type A students recalled more items in an experiment and earned reliably more honors than did Type Bs. Type As may "gain greater academic recognition" than Type Bs (Glass, 1977, p. 40).

Iso-Ahola and Weissinger (1985) found, in a U. S. sample, that Type As

have a significantly higher level of participation in competitive sports, fitness-oriented sports, and outdoor activities than Type Bs. Kelly and Houston (1985) also reported similar results based on a sample of employed women in the U.S. In a sample of students in the U. S., Tang (1986b) found that during the free-choice period "Type As work hard in a work setting and also play hard in leisure activities" (p. 9). Further, Crandall and Slivken (1978, 1980; Slivken, 1976) stated that those who endorse the Leisure Ethic may have a greater preference for leisure activities and may obtain a greater degree of leisure satisfaction than those who do not.

Very little has been done concerning Type A personality and Leisure ethic in the Chinese society. Recently, Tang (1986a) found that Type A Chinese college students were more productive on an anagram-solving task in a free-choice period than Type Bs. No research has examined the effects of Leisure Ethic and Type A personality on work and leisure in a Chinese sample.

Effects of Leisure Ethic and Type A Personality on Work and Leisure

In a laboratory experiment using university students in the U.S., Tang and Baumeister (1984) examined the effects of the Leisure Ethic (Crandall & Slivken, 1980), Type A personality (Sales, 1969, Vickers, 1975), and task labels (work vs. leisure) on subjects' task preference. An identical anagram-solving task was labeled as either "work" or "leisure". After subjects performed on a work-related task or a leisure-oriented activity, they were given a free-choice period. Their time spent on two word-making tasks dur[illegible] the free-choice period was recorded by the experimenter behind a one-way mirror. Subjects were classified as either Type A or Type B, and as either high Leisure Ethic or low Leisure Ethic, based on the median-split in their scores on the Type A and Leisure Ethic measures. Tang and Baumeister found a

significant three-way interaction effect on subjects' task preference: "Type A subjects spent most free-choice time on the target activities when they had been labeled as leisure and the subject endorsed the desirability of leisure activities, or when the task was labeled as work and the subject did not value leisure" (p. 101-102, emphases added). In short, the interaction between Leisure Ethic endorsement and task label (work vs. leisure) was significant among Type A coronary-prone subjects, but was not significant among Type B subjects.

Type A coronary-prone persons have been found to be more hard-driving and competitive than Type B individuals (Friedman & Rosenman, 1974; Glass, 1977; Jenkins, Rosenman, & Friedman, 1967; Tang, 1986a, 1986b). During the free-choice period, Type As with a high level of leisure values tended to spend more time on leisure-related activities. Type As with a low level of Leisure Ethic endorsement, might have a lower preference for leisure-related activities. Therefore, given free-choice, they tended to spend more time on work-related activities.

The major purpose of the present investigation was to replicate Tang and Baumeister's (1984) study by using a sample of university students in a different society (Taiwan, Republic of China). In the present study, subjects' behaviors in "work" and "leisure" were also examined. Since the major "work" related activity for university students in an academic setting was their academic performance, therefore, university students' total academic performance was examined. Further, students' grades in "physical education" were considered as a part of their academic performance, since these grades were included in the calculation of their overall academic performance (equivalent to the overall GPA), although presumably a physical education

course is related to students' physical activities. These activities, e.g., various ball or court sports, can be considered as leisure-related activities, hence students' grades in physical education (which can be labeled as either work or leisure) were also included in the present study on an exploratory basis. Students' reported leisure activities were likewise analyzed.

On the basis of results suggested by Tang and Baumeister (1984), it was predicted that Type A students with a high Leisure Ethic would have a higher frequency of participation in leisure activities in a semester than would other students, and that Type A students with a low Leisure Ethic would have a higher academic performance (overall semester grade) than would other students. Furthermore, since those who have endorsed the Leisure Ethic would have higher preference for leisure activities than those who did not endorse the Leisure Ethic (cf. Crandall & Slivken, 1978, 1980), it was also predicted that high Leisure Ethic students would have a significantly higher frequency of participation in leisure activities than would those low Leisure Ethic students. Thus, the following hypotheses were tested.

1: High Leisure Ethic students would have a higher frequency of involvement in leisure activities than would low Leisure Ethic students.

2: Type A students with a high Leisure Ethic would have a higher frequency of participation in active leisure activities than would other students.

3: Type A students with a low Leisure Ethic would have a higher total academic performance (overall semester grade) than would other students.

Method

Subjects

Subjects were 27 male and 31 female undergraduate students in a general psychology class at National Taiwan University, Taiwan, Republic of China. Forty were first-year psychology majors; the others were second-year non-majors. Average age was 20. All these students participated as volunteers; no extra credit was offered.

Measures

Leisure Ethic Scale. The short form (10-item) of Leisure Ethic Scale, developed by Crandall and Slivken (1978, 1980), was used to measure individuals' attitudes toward leisure. The Leisure Ethic Scale has a reliability alpha of .76. Test-retest reliabilities have been .82, .59, .87, and .85 from one to five weeks (Crandall & Slivken, 1980). This scale correlated with the Burdge's (1961) Leisure Ethic Scale (r = .54), the Neulinger's (1974) affinity for leisure subscale (r = .50), and with satisfaction with leisure (r = .55). Crandall and Slivken (1978) also found in a study using the longer form that business students were one complete standard deviation below the leisure studies students on the Leisure Ethic Scale: the leisure majors always answering in the more pro-leisure direction. This scale has been a significant predictor of wilderness use and intentions of future wilderness use. The Leisure Ethic Scale was presented to subjects in the form of a seven-point, Likert-type scale with "disagree strongly" (1), "neutral" (4), and "agree strongly" (7) as anchor points.

Type A Personality. A short measure of Type A personality (Sales, 1969; Vickers, 1975) was adopted for the present study. Each item of this brief, self-completed, nine-item scale is presented in the form of a seven-point, Likert-type scale ranging from "very true of me" (7) to "not at all true of me"

(1). This scale has correlated significantly with the Jenkins Activity Survey (r = .80) and has been strongly associated with the presence of a number of coronary risk factors (French & Caplan, 1969). The scale has had an internal consistency (estimated alpha coefficient) of .80 and a high correlation with the longer scale, r = .90 (Vickers, 1975). This scale used in the present study has been tested in a pilot study using 50 undergraduate college students in the U.S.; the test-retest reliability (with four weeks apart) was .87. Further, this measure makes several references to work, for example, "In comparison to most people I know, I'm very involved in my work".

The Leisure Ethic Scale (Crandall & Slivken, 1980) and Type A personality (Sales, 1969; Vickers, 1975) were translated into Chinese by the author. The Chinese version of the questionnaire was independently back translated into English by two psychologists fluent in both Chinese and English. The present author made some minor changes based on the original English version, the Chinese version and the back translated versions. The final form was thus regarded as possessing a satisfactory degree of cross-language equivalence. Psychometric properties of the Type A behavioral pattern and Leisure Ethic as used in a Chinese sample and an U.S. sample were presented elsewhere (Tang & Baumeister, 1984). Generally, results suggested comparability between the measures and the two samples.

Procedure

One questionnaire which measured Leisure Ethic and Type A personality was administered to 58 volunteers on the first day of the class in the spring semester. The subjects were informed that their responses on the questionnaire would be used for research purposes only and were asked to answer the items honestly and thoughtfully. Another questionnaire which measured leisure

activities during the semester was administered on the last day of the semester. On this second questionnaire, each student was asked to indicate the number of movies, live concerts/popular musical performances, picnics, and dancing parties that he/she had attended in the spring semester. Further, with the consent of students, students' overall semester grades and their grades in physical education of the previous (fall) semester were obtained from the University. It was expected that students' grades of the previous fall semester would not be influenced by their activities of the spring semester. Academic records of students who came from other campuses of the university were not available at the main campus; their academic performance and grades were treated as missing data. No letter grades (A, B, C, D, and F) are given to students in Taiwan; therefore, students' grades in different courses and the overall semester grades were expressed in the form of raw scores, with 100 as a full grade and 60 as a passing grade. The mean, standard deviation, and correlations among the variables are presented in Table 1.

The results of two separate one-way ANOVAs revealed that there was no significant difference between males ($\underline{M}$ = 45.63) and females ($\underline{M}$ = 43.65) scores on the Leisure Ethic scale, $\underline{F}$ (1, 56) = 1.05, $\underline{p}$ = .311. Further, no significant difference was found between males ($\underline{M}$ = 43.11) and females ($\underline{M}$ = 42.94) in terms of their Type A coronary-prone behavior pattern, $\underline{F}$ (1, 56) = .007, $\underline{p}$ = .934. Data from both males and females, therefore, were combined in these analyses.

Results

The results displayed in Table 1 show that subjects' endorsement of the Leisure Ethic tended to be negatively correlated with the Type A personality. Further, subjects' Leisure Ethic tended to be positively correlated with the

number of times students went to the movies and live concerts/popular musical performances in a semester. It was also found that Type A personality tended to be negatively correlated with the number of times students went to the movies in a semester. Age was not significantly correlated with any of these major variables examined in the present study.

Insert Table 1 about here

Following the same procedures used by Tang and Baumeister (1984), subjects were classified as either Type A or Type B, and either high Leisure Ethic group and low Leisure Ethic, based on the median-split in their scores on the Type A scale and the Leisure Ethic Scale. The four dependent variables examined in the present study were the number of times students went to the movies, the number of times students went to live concerts/popular musical performances, the semester grade of physical education, and the total semester grade (equivalent to the overall GPA of the semester). The four dependent variables were analyzed by using four separate 2 (Leisure Ethic) x 2 (Type A Personality) ANOVAs.

Movies

The main effect of Leisure Ethic on the number of times students went to the movies reached significance, F (1, 31) = 6.83, p = .014, omega squared = .139. Therefore, college students with a high Leisure Ethic endorsement tended to watch more movies (M = 10.47) than those students with low Leisure Ethic values (M = 5.56). The main effect of Type A personality and the interaction effect between Type A and Leisure Ethic failed to reach significance. Therefore, Hypothesis 1 was supported.

Live Concerts

The main effect of Leisure Ethic on the number of times students went to live concerts/popular musical performances is significant at $p = .011$, F (1, 31) = 7.39, omega squared = .121. Those with a high leisure orientation thus attended significantly more live concerts/popular musical performances (M = 3.79) than did those with a low leisure orientation (M = 1.56). H1 was again supported by the present data.

Type As also attended significantly more live concerts/popular musical performances (M = 4.56) than did Type Bs (M = .88), F (1, 31) = 12.35, p = .001, omega squared = .214. Further, the interaction between Leisure Ethic and Type A personality also reached significance, F (1, 31) = 5.73, p = .023, omega squared = .089.

The simple main-effects test for high Leisure Ethic subjects shows that Type As attended more live concerts/popular musical performances (M = 8.71) than did Type Bs (M = .92), F (1, 31) = 14.77, p = .001. However, for low Leisure Ethic subjects, the simple main-effects test indicates that the difference between Type As (M = 1.91) and Type Bs (M = .80) did not reach significance, F (1, 31) = .03, p = .863.

For Type As, the simple main-effects test is significant: high Leisure Ethic subjects attended significantly more live concerts/popular musical performances (M = 8.71) than did low Leisure Ethic subjects (M = 1.91), F (1, 31) = 9.85, p = .004. For Type Bs, the results failed to reach significance, F (1, 31) = .92, p = .344. Further, the results of a LSD test shows that Type A subjects with high Leisure Ethic attended significantly more popular musical performances than did the average of the other three groups (M = 1.21), t (31) = 5.10, $p < .01$. Thus, Hypothesis 2 was supported.

Physical Education

Students' semester grade of a physical education course was also examined in a 2 x 2 ANOVA. No significant result was found. Thereby, it appears that Leisure Ethic and Type A personality had no significant effect on students' grades in a physical education course.

Total Academic Performance (Overall Semester Grade)

The interaction effect of Leisure Ethic and Type A personality on students' total academic performance (i.e., equivalent to the overall GPA of the semester) was significant, F (1, 40) = 4.18, p = .048, omega squared = .067.

The results of the simple main-effects test for Type As shows that subjects with low Leisure Ethic endorsement had a significantly better total academic performance (M = 80.86) than did those with high Leisure Ethic values (M = 75.65), F (1, 40) = 5.07, p = .030. For Type Bs, the simple main-effects test showed that the difference between high Leisure Ethic subjects (M = 77.69) and low Leisure Ethic subjects (M = 75.46) was not significant, F (1, 40) = .39, p = .535.

For subjects with high leisure values, Type As (M = 75.65) did not differ from Type Bs (M = 77.69) in terms of their total academic performance, F (1, 40) = .39, p = .534. However, for low Leisure Ethic students, Type As performed much better in their overall semester grade (M = 80.86) than did Type Bs (M = 75.46), F (1, 40) = 5.24, p = .027. Moreover, according to a LSD test, Type As with low Leisure Ethic tended to have a better academic performance than did the average of the other three groups (M = 76.27), t (40) = 2.45, $p < .05$. Thereby, Hypothesis 3 was supported.

Discussion

Although the use of VCR is becoming more and more popular in Taiwan, going to movies and live popular musical performances are still two of the most popular pastimes among students. In the present study, Chinese students' Leisure Ethic scores tended to be positively correlated with their reported frequencies of going to movies and live concerts. Moreover, students with high Leisure Ethic also tended to have higher reported frequencies of going to movies and live concerts than did those with low Leisure Ethic. These results can be used to support the validity of the Leisure Ethic Scale (Crandall & Slivken, 1978, 1980) in a Chinese sample.

It was also found in the present study that the Type A personality measure tended to be negatively correlated with the number of times Chinese college students went to the movies in a semester. Further, Type A students tended to attend more live concerts/popular musical performances than did those Type B students; therefore, Type As may have shown a preference for live concerts over movies. Several explanations are provided as follows. First, according to Tinsley and Johnson (1984), and Overs, Taylor, Cassell and Chernov (1977), going to movies and attending popular musical performances are treated as two separate types of leisure activities.

Second, movie goers are not able to interact with the movie itself (with few exceptions), whereas those people attending live concerts usually are involved with the music, performance, and may interact with the performer(s). Most people in live shows would move with the beat of the music, or even dance with the music. Thus, different levels of participation and involvement are associated with movies and live concerts/popular musical performances. Live concerts may be considered as a more "active" leisure activity than movies.

Third, Type A individuals are more aggressive, competitive, impatient, and

ambitious than are Type Bs (Jenkins et al., 1967). Type As also have an extreme sense of time urgency (Jenkins et al., 1967). Moreover, Type As have a strong tendency to move about and explore, and less tendency to sit still in the waiting and relaxation periods (Hughes et al., 1983). Therefore, it is not very likely for Type As to sit in a movie theater and watch a movie in a passive and inactive manner. Type As probably may not want to "waste their time" in activities that are low in involvement and participation; hence, Type As probably do not like to go to movies. On the other hand, live concerts and popular musical performances offer active involvements and participation. These activities also satisfy their "needs to be aggressive, authoritarian, dominant and exhibitionistic in their relationship with others" (Tinsley & Johnson, 1984, p. 240). Thus, the differences between Type As' involvements in movies and live concerts can be explained by the satisfaction of different motives and needs in these activities.

The results of the present study further support the findings of Iso-Ahola and Weissinger (1985) and Kelly and Houston (1985): Type As are involved in "competitive" sports and leisure activities than are Type Bs. It appears that Type A Chinese students are interested in certain types of leisure activities that are competitive, active, and participative in nature, whereas Type Bs are not. These results can be used to support the validity of the Type A personality measure (Sales, 1969; Vickers, 1975) and the impact of Type A personality on people's leisure activities in a Chinese sample.

Students' semester grades in physical education are a reflection of their physical strength, skills, coordination, and speed in track and field sports, and different ball or court sports. Therefore, an individual's interests in leisure activities do not necessarily help him/her run faster or shoot more

goals. These objective measures are directly related to the students' grades in the physical education course. Therefore, it is reasonable to believe that an individual's interests in leisure and his or her coronary-prone behavior pattern would have little, if any, impact on these activities and the semester grade.

Leisure Ethic endorsement tended to be negatively correlated with Type A personality. Two possible explanations are offered. First, leisure attitudes are related to people's liking for leisure, relaxation, playfulness, and activities that are without external coercion (cf. Crandall & Slivken, 1980; Tinsely & Tinsley, 1982) which are different from or the opposite of attitudes or behavior patterns related to time urgency, competitiveness, impatience, and deadline, i.e., their Type A personality (cf. Friedman & Rosenman, 1974; Jenkins et al., 1967). Second, Type A personality measure (Sales, 1969; Vickers, 1975) made several references to work, whereas the Leisure Ethic Scale made no reference to work and measured people's leisure-related values. It is suggested that Type A personality measure may lead subjects to "the dialectical thinking pattern in which work becomes contradictory, rather than complementary to leisure" (Iso-Ahola & Muttimer, 1982, p. 433).

The results of the present study further supported Tang and Baumeister's (1984) findings in that individuals' Leisure Ethic endorsement and Type A personality have significant impacts on their leisure activity participation and choices as well as their work if for university students, their total academic performance effort can be considered as their major work activity. The interaction effects between Leisure Ethic and Type A personality on the total academic performance and live concerts were both significant in the present study. Further, the results were significant for Type As but not significant

for Type Bs.

The results of the present study suggest that, if individuals' Type A personality is combined with their high Leisure Ethic endorsement, they tend to like leisure and "actually involve" in leisure activities that are "active" and participative in nature (e.g., live concerts, rather than movies). If individuals' Type A personality is combined with their low Leisure Ethic endorsement, they tend to exert their effort in doing their "work-related" activities as a student (i.e., academic performance). It can be concluded that the results of Tang and Baumeister's laboratory study using college students in the U.S. have been replicated in this field study using college students in Taiwan.

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Table 1

Mean, Standard Deviation, and Correlations of Measures

Variable	M	SD	N	2	3	4	5	6	7
1. Age	20.50	1.27	58	-10	09	-02	-07	-03	-05
2. Leisure Ethic	44.57	7.38	58		-22*	34*	28*	10	-17
3. Type A Personality	43.02	7.95	58			-48***	26	-03	03
4. Movies	8.63	5.24	38				-05	12	-02
5. Live Concerts	2.84	4.62	38					18	-19
6. Physical Education	76.71	6.45	40						03
7. Overall Semester Grade	78.11	5.90	40						

Note. All decimals have been omitted for correlations. *$p < .05$, ***$p < .001$.

Table 2

Summary of Analyses of Variance

Variable	Source of Variance	df	MS	F	p	Omega Squared
Movies						
	Leisure (A)	1	154.19	6.83	.014	.139
	Type A (B)	1	16.84	.75	.394	
	A x B	1	.37	.02	.899	
	Error	31	22.56			
Live Concerts/ Popular Musical Performances						
	A	1	111.64	7.39	.011	.121
	B	1	186.53	12.35	.001	.214
	A x B	1	86.51	5.73	.023	.089
	Error	31	15.10			
Physical Education						
	A	1	.15	.003	.955	
	B	1	2.34	.05	.822	
	A x B	1	70.92	1.56	.220	
	Error	40	45.58			
Total Academic Performance (Overall Semester Grade)						
	A	1	32.44	.97	.33	
	B	1	19.33	.58	.451	
	A x B	1	139.18	4.18	.048	.067
	Error	40	33.30			